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Foreign Language Learning Characteristics of Deaf and Severely Hard-of-Hearing Students

KATA CSIZÉR[1] and EDIT H. KONTRA[2]
[1]*Eötvös Loránd University, ELTE Angol Amerikai Intézet, Rákóczi út 5, 1088 Budapest, Hungary Email: wein.kata@btk.elte.hu*
[2]*Selye János University, Department of English Language and Literature, 3322 Bratislavská cesta, Komárno 94501, Slovakia Email: ehkontra@gmail.com*

The aim of this study was to investigate deaf and severely hard-of-hearing students' foreign language learning characteristics. In order to provide a better understanding of the challenges this group of learners face, a mixed methods study was designed including a questionnaire survey to provide generalizable results for our context and an interview study to get a deeper understanding of the issue from the insiders' perspective as well. Data was collected in three European countries with piloted and barrier-free instruments. In order to investigate their foreign language learning processes, deaf and severely hard-of-hearing students' motivation, beliefs, and strategies were measured and analyzed. Our results indicate that deaf and severely hard-of-hearing students' foreign language learning experiences are fraught with challenges and setbacks despite their motivation and eagerness to learn foreign languages. To overcome these difficulties motivating and effective learning environments have to be created where the use of the national sign language contributes to the efficiency of teaching. Furthermore, teaching should include the presentation of effective learning strategies as well as the introduction of autonomous ways of learning.

Keywords: deaf and hard-of-hearing students; foreign language learning; special needs language learners

THE EDUCATION OF SPECIAL NEEDS groups has received increased attention worldwide in the past few decades (UNESCO, 1994; United Nations, 2007), but only recently have second language acquisition (SLA) researchers started to think about them as language learners and language users who are active participants in shaping the multilingual discourse community of our globalized world. Deaf and severely hard-of-hearing sign language users have been particularly neglected in this respect due to their relatively small number and low visibility. (The estimation of the number of deaf people in any society is approximately .1% to .2% [European Commission, 2005, p. 86].) In line with the recommendation of The Douglas Fir Group (2016), who call for a new responsiveness in SLA research toward the needs of people who are living or learning to live with more than one language and emphasize the need for a problem-oriented, transdisciplinary approach that addresses real-life issues, this mixed methods study examines the situation of foreign language learners with a profound or severe hearing loss in three non-English speaking countries in Europe.

In today's globalized world, English is the most popular language (European Commission/Eurydice, 2017) that is taught at school as well as in adult education as an essential means of international communication both in the public and the private sphere, and deaf and severely hard-of-hearing people have every right to claim their fair share in this new world. It is the duty of SLA professionals to recognize and respond

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to the needs of this special needs group and to contribute to the realization of their equal rights in foreign language education by exploring their situation, raising awareness of their needs, and recommending solutions to the challenges they face. The aim of this mixed methods study is to introduce deaf and severely hard-of-hearing young people from East-Central Europe who are currently students at a higher educational institution or have recently pursued studies in one and have gained experience in trying to achieve some level of proficiency in English as a foreign language (EFL). Through their life experience the readers can gain an insider's perspective of what it is like to learn a foreign language one does not hear via methods, techniques, and materials developed for the hearing community.

EDUCATING PERSONS WITH A HEARING LOSS

Concepts and Terminology

When writing about persons with a hearing loss, the first hurdle to overcome is deciding about the use of terminology. Hearing loss can be mild, moderate, severe, or profound. According to Marschark and Spencer (2009), the term 'hard-of-hearing' is "[g]enerally used to refer to a hearing loss at a level that significantly limits but does not preclude perception of spoken language through audition alone. This term includes most people with hearing loss from mild to the severe range" (p. xiii). It also includes 'deafened' persons, those who have become completely deaf after the acquisition of speech (International Federation of Hard of Hearing People, n.d.). Hard-of-hearing persons can usually benefit from the use of hearing aids and other assistive devices. The term 'deaf,' on the other hand, denotes "(1) [a]udiologically, the condition of having a hearing loss in the severe-to-profound or profound range; (2) [a] member of a community that uses a Sign Language and shares a common bond of identity. When used to indicate a community or its members, the first letter of the word "Deaf" is capitalised" (Marschark & Spencer, 2009, p. xi).

People with more significant hearing losses might benefit from cochlear implants (CI); however, it must be noted that "an implant does not restore normal hearing, instead it can give a useful representation of sounds and enhance speech comprehension" (International Federation of Hard of Hearing People, n.d.). Cochlear implants do constitute a subject of controversy. Since members of the Deaf community do not consider themselves as 'disabled' but as proud members of a cultural and linguistic minority, they do not wish to be 'cured' of their deafness and reject the use of CIs (Sparrow, 2005, p. 135).

The focus in this study is on those with severe or profound hearing losses including deafened persons as well as those who have received a CI. The target group is termed as 'deaf and severely hard-of-hearing.' Owing to its negative connotations, the term 'hearing impaired' is rejected as unacceptable by the Deaf community and is not used in this study.

The education of deaf and severely hard-of-hearing students is still overshadowed by the more than 200-year-old oral versus manual controversy (Moores, 2010): Should the education of deaf children take place in the majority spoken language or should the national sign language be used for transmitting knowledge and information (Jokinen, 2000; Svartholm, 1994)? The standpoint of the World Federation of the Deaf (WFD) is clear. In a position paper it asserts that "Deaf children must have full access to an education in their native sign language(s), regardless of any technological devices they may use" (World Federation of the Deaf, 2016, p. 1). This question is particularly relevant in foreign language teaching, which by definition is meant to build on an already developed linguistic system in a first language (L1). Svartholm (1994) argues that the "first language must be a language which is of optimal accessibility to the child" (p. 63). Furthermore, as the first sign linguist, Stokoe (2000), observes, interacting with the child in a language that they have full access to, a language that they can see, namely sign language, promotes not only their linguistic competence but also their "mental growth" (p. 7). However, approximately 90% to 95% of deaf children throughout the world are born to hearing parents (Skutnabb–Kangas, 2008) who, as pointed out by Jokinen (WFD President 2003–2011), "are advised not to use sign language and to use speech which the Deaf child can at best make minimal use of but mostly none at all" (2000, p. 206). These children grow up exposed to a language they do not hear or perceive only fragments of and enter school with impoverished knowledge of language and communication skills in any language and with less than age-appropriate vocabulary and knowledge about the world (Luckner, 2010). They gain knowledge of the societal language item by item through a laborious teaching–learning process at school but, as Goldin–Meadow and Mayberry (2001) point out, a *first* language cannot be learned through print. Deaf and severely hard-of-hearing children

of hearing parents only acquire the national sign language in playgroups, in kindergarten, or at school by interacting with the other signing children, especially the children of Deaf parents.

As can be seen from the above, the special needs with which deaf and severely hard-of-hearing children enter school are not caused by lack of hearing per se, but by the lack of exposure to fully accessible language input in infancy and in early childhood. This is what leads to a significant delay in the development of vocabulary, and even more delay in the acquisition of syntax and morphology (Mayberry, 2002), and this is what explains the poor reading achievement of most deaf and severely hard-of-hearing school leavers (Allen, 1994).

Teaching English to Deaf Persons

In English speaking countries, the teaching of English to deaf and severely hard-of-hearing students means teaching the societal language; therefore, research and professional discourse center mainly on the development of literacy skills. As noted by Swanwick, "[d]eaf children's literacy development is the most researched topic in deaf education" (2016, pp. 9–10). On the other hand, in non-English speaking countries, which constitute the context of the present study, English is a foreign language, an L3 that students are taught at school in merely a few hours a week. Here the fundamental question is how to teach it effectively so that deaf and severely hard-of-hearing students gain English language skills they can use for private and professional purposes.

Although this is a new area in SLA research (Kontra, 2020), there are a few studies available that can guide teachers, curriculum designers, and policy makers in non-English speaking countries. One line of such research includes the investigation of learner characteristics in the Hungarian setting based on individual difference (ID) research in applied linguistics (Dörnyei & Ryan, 2015). In a study investigating the language learning experiences of 14–19-year-olds in special schools in Hungary (Csizér, Kontra, & Piniel, 2015), motivation, beliefs, and learning strategies were selected as markedly important for deaf and severely hard-of-hearing students and thus mapped empirically. Results showed that there were no differences in the types of ID variables describing deaf and severely hard-of-hearing learners in comparison to their hearing counterparts, but there were significant discrepancies in the appraisal of these variables between students with and without hearing loss. In addition, the deficit approach used in this teaching context impacted negatively the selves of deaf and severely hard-of-hearing learners. The special schools where the research was conducted applied the auditory–verbal approach in teaching (Csuhai et al., 2009) and only 2 out of the 10 language teachers reported to be proficient users of Hungarian Sign Language (HSL).

Scandinavian countries were the first to acknowledge deaf students' need for instruction in sign language including the teaching of EFL (Pritchard, 2013; Svartholm, 2008). The new curriculum introduced in Sweden in 1994 made special schools responsible for providing bilingual—Swedish and Swedish Sign Language—education for deaf children (Svartholm, 2008). Written English was to be taught as an L3 via reading and making use of the children's knowledge of Swedish Sign Language as their L1 and Swedish as their L2. In Norway, the 1997 educational reform made the teaching of British Sign Language (BSL) compulsory in grades 1 and 2 of the primary school as a bridge to introducing English as a written or spoken language. Via learning BSL the students familiarize themselves with the idea that there are foreign languages and foreign cultures while they also develop metalinguistic skills and language learning strategies. Their knowledge of BSL can be subsequently used by the teachers in various ways in the process of teaching written or spoken English. Part of the program is that teachers of English get support in learning not only Norwegian Sign Language but also BSL.

The situation is very different in countries with strong oralist traditions in the education of deaf and severely hard-of-hearing children such as Austria, the Czech Republic, and Hungary, the three participating countries in this research, but oralist approaches dominate in Poland, Germany, or France as well (cf. Bedoin, 2011; Domagała–Zyśk & Kontra, 2016; Kellett Bidoli & Ochse, 2008; Stoppok, n.d.). There are some publications that describe the successful application of speech in teaching EFL to students with hearing loss (e.g., Domagała–Zyśk & Podlewska, 2019), and there are a number of others that advocate the use of sign language and a bilingual approach (e.g., Falkowska, 2016; Gulati, 2016; Machová, 2008). Interesting is the case of French schools, where English as an L3 is compulsory at the secondary level. Bilingual education can formally be opted for; however, in practice, the oral–aural method, which does not include the use of any sign language but "concentrates on the development of speech, speechreading, and the use of residual hearing" (Moores, 2010, p.21) prevails

(Bedoin, 2011). Teachers in Bedoin's study are expected to deliver their classes exclusively in the target language, English, but this is too difficult for the students to follow, so a great deal of code switching to French or French Sign Language is inevitable. Therefore, Bedoin suggests that the training program of language teachers for deaf students should have a strong sign language component so that teachers can use it as the language of instruction and she recommends that only written English should be taught to deaf sign language users. She also notes that deaf students should not be mixed with hearing students in English classes so that sign language can be used in class. Regrettably, the lack of EFL teachers trained in the national and/or the foreign sign language is currently a major obstacle in the way of introducing the bilingual teaching of English both in France and elsewhere (Dotter, 2008; Eitzen & Bartz, 2016; Gulati, 2016; Janáková, 2008; Piniel, Kontra, & Csizér, 2016).

The realization that deaf and severely hard-of-hearing students in higher education cannot benefit from European mobility programs without effective English language education and may be at a disadvantage in other areas of life as well has recently led to the setting up of an international project by Austrian, Czech, Hungarian, and British participants to design online English and BSL courses and develop teaching methods and materials for students in higher education. As an initial step in the project, first-hand information was gathered via an online survey and subsequent individual interviews in Austria, the Czech Republic, and Hungary to find out about the positive and negative experiences of profoundly deaf and severely hard-of-hearing students, as well as their individual motives, needs, and preferences in learning English.

The research questions the present study aims to answer are as follows:

RQ1. What characterizes the participating deaf and severely hard-of-hearing students as language learners?

RQ2. What can be learnt from their experiences with learning English in Austria, the Czech Republic, and Hungary from the perspective of EFL teaching and materials design?

METHODS

In order to explore and understand the L2 learning characteristics and experiences of deaf and severely hard-of-hearing students, a mixed methods study consisting of a quantitative and a qualitative part was carried out. This approach was found most useful for two reasons: First, these learners represent a unique group of special needs students as explained above. Second, given the fact that the population is rather small but varied it was important to take into account multiple viewpoints in different contexts. Therefore, first a small-scale survey was conducted among 54 participants to collect generalizable data and to help us select learners for the second, qualitative phase of the study, which entailed face-to-face individual interviews with 12 respondents.

Participants

Convenience sampling was used in both phases of the research. Survey participants were recruited from three European countries involved in the research project: Austria, the Czech Republic, and Hungary. The criterion for participant selection was that they had to be college or university students at the time of data collection or had to have pursued studies in tertiary education at any time in the preceding 5 years, and had to have experience in foreign language learning. The survey sample consisted of 54 students: from Austria ($n = 12$), the Czech Republic ($n = 27$), and Hungary ($n = 15$). As for the gender distribution of our survey participants, we had 36 females and 18 males in our sample. The average age of the survey participants was higher than what is usual for hearing students in tertiary education. In Hungary 35, in the Czech Republic 31, and in Austria 29 years old was the mean age. Concerning their hearing status, we relied on the survey participants' self-identification. The questionnaire offered three options: deaf, hard-of-hearing, or other, where survey participants were invited to add their own preferred term for identification. Thirty survey participants identified themselves as deaf, while 15 as severely hard-of-hearing. The remaining nine participants answered that they had a cochlear implant ($n = 3$) or indicated that they had a mixed identity ($n = 6$) by writing "both," for instance. This is not unusual; it happens that someone says they are audiologically hard-of-hearing but culturally Deaf (cf. Kontra, 2017a; Kontráné Hegybíró, 2010).

In the qualitative phase of our study, we had 12 interview participants, four from each country. Some of them were participants of our survey who voluntarily expressed interest in taking part in the second phase of the research as well. Other respondents were recruited by English teachers at the participating institutions. Although it was a

convenience sample, achieving maximum variety as regards gender, age, hearing status, field and level of study, and level of proficiency in English was attempted (for an overview see Table 1). The average age of the participants, similarly to the survey sample, was relatively high: in Austria it was 30 years, in the Czech Republic 30.5 years, and in Hungary 31.25 years, but it is not uncommon for special needs persons to take several detours before landing in a degree program that they feel they can pursue to the end or to extend studies for several extra years. The gender distribution was even for male and female respondents in both Hungary and the Czech Republic, whereas in Austria one male and three female students constituted the sample. As for the interview participants' hearing status, in Austria three interview participants identified themselves as deaf and one as having a cochlear implant (CI), in the Czech Republic we had two deaf, one severely hard-of-hearing, and one participant with a CI, and in Hungary there were two deaf and one severely hard-of-hearing participants, and one participant identified herself as *deafened* because she had only lost her hearing during adolescence. Since our aim was to have a maximum variety sample, the deafened interviewee was also included in the sample. The interviews were conducted in the preferred language of the participants: seven interviews in the respective local sign language with professional interpretation into English, two in spoken Hungarian, one in spoken Czech with interpretation into English, one in spoken Czech as well as Czech Sign Language (CZSL) with interpretation into English, and one interviewee used spoken English and required no interpretation since combined with lip-reading he said he was able to understand the interviewer's English.

Instruments

The role of the questionnaire in this study was to collect data about some of the important individual difference (ID) variables of deaf and severely hard-of-hearing students. We maintain the longstanding opinion that among ID variables, motivation plays a crucial role subsuming the amount of effort and persistence students invest into language learning as without being motivated it is difficult to imagine long-term success in L2 learning, or in any other learning processes for that matter (Dörnyei & Ushioda, 2011). We measured the following motivational scales in our study using 5-point scales on which participants had to indicate to what extent they agreed or disagreed with the individual statements:

1. Interest and determination (5 items): measuring language learners' interest and determination. Example: *It is very important to me to learn a foreign language.*
2. Instrumentality (4 items): tapping into the pragmatic value of knowing a foreign language. Example: *Deaf people who know English can get a job easily.*
3. Contact (6 items): participants' views about the importance of English in contact experiences. Example: *When I meet hearing foreigners, I need English to communicate with them.*
4. Milieu (5 items): to what extent participants are helped by their friends and family members to learn English. Example: *My friends and family encourage me to learn English.*
5. Using English on the internet (4 items): the extent and need for participants to use the internet in English. Example: *For using the internet it is necessary to know English.*

Previous studies on deaf and severely hard-of-hearing learners indicated the importance of teaching methods in shaping participants' learning experiences as well as the fundamental role sign language use in and outside school plays in the participants' lives and learning processes (Csizér, Piniel, & Kontráné Hegybíró, 2015; Kontra & Csizér, 2013; Kontra, Csizér, & Piniel, 2014); therefore, the following scales (using the same 5-point format) were also included in our study:

1. Teaching methods (4 items): what teaching methods and approaches are preferred in foreign language learning by deaf persons. Example: *It would be nice if there were many Deaf English teachers.*
2. Beliefs about sign language in schools (5 items): the role participants attribute to the use of sign language in education. Example: *A teacher who uses sign language in the lesson is effective.*
3. Beliefs about sign language in life (5 items): the role participants attribute to sign language in life. Example: *Deaf people can express anything in sign language.*

In order to assess participants' language learning processes, three scales measuring various learning strategies were also included in our questionnaire. From among the strategy groups well documented in the literature (O'Malley & Chamot, 1990; Oxford, 1990) we included in this investigation those strategy groups that

TABLE 1
Interview Participants

Participant	Age/Sex	Hearing Status	Field of Study	English or Other L3 Taught			Language Used in the Interview
				In Elementary	In High School	At University	
1. CZ Dana	38 F	Deaf	Special pedagogy	–	√	Compulsory	CZSL
2. CZ Pavel	35 M	HH	IT and special pedagogy	√	√	Compulsory	Czech, CZSL
3. CZ Adel	24 F	Deaf	Accounting	Elective	General English and ESP	Compulsory	CZSL
4. CZ Ludvik	25 M	CI	IT	Elective	√	Compulsory	Czech
5. AU Martina	38 F	Deaf	Educational science	√	√	–	ÖGS
6. AU Leo	26 M	CI	Economy	√	√	–	English
7. AU Doris	31 F	Deaf	Math education	√	√	–	ÖGS
8. AU Elsa	26 F	Deaf	Sport science	√	√	–	ÖGS
9. HU Anna	32 F	Deafened	German and Dutch	√	√	ESP at the dormitory	Hungarian speech and chat
10. HU Emil	38 M	HH	IT and pedagogy	For 1 year only√	Exempted	Chance courses by opportunity	Hungarian
11. HU Csaba	26 M	Deaf	Text editing	√	√	–	HSL
12. HU Barbara	29 F	Deaf	German and Italian	German	German	Self-teaching	HSL

deaf participants from previous investigations reported using (Csizér, Kontra, et al., 2015):

1. Cognitive language learning strategies (6 items): the manipulation or transformation of the target language in order to enhance learning. Example: *In order to memorize new English words, I write them down several times.*
2. Affective language learning strategies (3 items): taking control over emotions and attitudes about learning. Example: *When I am taking an English course and I answer the teacher's question correctly, I feel good about myself.*
3. Social language learning strategies (2 items): cooperating or interacting with another, usually more proficient person to enhance language learning. Example: *If I do not understand something during the English lesson, I ask the teacher.* (No acceptable Cr. alpha)

The instrument used in the qualitative phase of our research was a semi-structured interview guide (see the Appendix). The semi-structured format was used in order to ensure that the individual interviews followed the same structure and that key points were discussed with each participant but at the same time there was a chance for the respondents to add further issues that they considered relevant to the topic. The interview guide covered the following main areas: current and previous language learning experiences, beliefs about language learning including self-efficacy beliefs, modality (teachers' use of sign language, students' use of translation into sign language when studying or reading), strategies for teaching and learning, and motivation to learn English.

Data Collection and Data Analysis

Data collection was executed in several steps starting with the quantitative phase. First, a preliminary questionnaire was developed in English. After several rounds of expert judgements including research experts and deaf consultants at each of the partner institutions, the final English version of the questionnaire was prepared. The English version of the instrument was then translated into the local spoken languages and, in order to ensure barrier-free data collection, into the national sign languages as well: Austrian (ÖGS), Czech (CzSL), and Hungarian (HSL). To check the quality of the translations, back-translated versions were prepared and checked against the original versions. Next, the local sign language versions were finalized and video recorded. The recordings were checked again by native speakers of the given sign languages. Following that, the online data collection form was prepared in three versions: German, Czech, and Hungarian, each accompanied by the video recording in the respective local sign language. After this, data collection took place online between June 2018 and October 2018. Prior to data analysis, these forms were compiled into a single Excel file, which was transferred to SPSS version 20.0. Quantitative data analysis, including descriptive statistics as well as correlational analysis, was performed for the purpose of the present article.

The qualitative data collection was preceded by the piloting of the interview guide. The first version was checked by two independent experts to ensure the quality of the collected data. After finalizing the tool, the interviews took place in the hometowns of the participants. The first author conducted the interviews in Hungary and the second author in the Czech Republic and Austria between September 2018 and January 2019. Each interview lasted for about an hour and was recorded using both an audio and a video recorder. In the Hungarian interviews the questions were asked in spoken or written Hungarian and responded to in speech or in sign language as indicated in Table 1. In the Czech and Austrian interviews the questions were presented in English with interpretation into the preferred spoken or signed language of the participants. The interviewees were encouraged to interrupt and ask for clarification any time they were not sure what a question meant. The interview transcripts were prepared by the researchers themselves and were checked against the video recordings by local colleagues and the respective sign language interpreters to make sure that no information was lost in translation. The interview transcripts yielded a 45,450-word database. The data were subjected to qualitative content analysis looking for emerging themes and patterns (Patton, 2002). In order to preserve the respondents' anonymity, in the Results section they are referred to by the pseudonyms listed in Table 1.

RESULTS

Survey Results

Based on the Cronbach's alpha values and the length of our scales, we can see acceptable internal consistency except for *Social learning strategies* (Table 2; Cronbach's alpha = .50; Dörnyei,

TABLE 2
Descriptive Statistics

Scales	Cr. alpha	Mean	*SD*
Interest/determination	.75	4.42	.66
Instrumentality	.68	3.49	1.07
Contact	.70	3.88	.80
Milieu	.89	3.68	1.10
Using English on the internet	.60	3.95	.68
Teaching methods	.71	4.67	.55
Beliefs about sign language in schools	.88	4.43	.76
Beliefs about sign language in life	.71	4.32	.69
Cognitive learning strategies	.78	3.24	.89
Social learning strategies	.50	–	–
Affective learning strategies	.84	4.26	.86

2007). This scale has therefore been excluded from further analysis. As opposed to the relatively low rating of cognitive strategies, the *Affective learning strategies* scale obtained one of the highest mean values indicating the importance of a stress-free learning context for deaf and severely hard-of hearing students. Our data provide no specific reason for this; it can only be speculated that the general tendency of deaf bilinguals to evaluate their language competencies as inadequate (Grosjean, 1996) is present among the participants, which they might be compensating for by the use of affective strategies. As regards the descriptive analysis, we can see that our participants have a very positive disposition to learning English with the *Interest and determination* scale reaching a mean value of 4.42 on a five-point scale. Similarly, positive endorsements can be detected for three additional scales: *Teaching methods* and *Beliefs about sign language use in/outside school.* These results confirm earlier studies about the enthusiasm deaf and severely hard-of-hearing learners show toward learning English (Csizér, Kontra, et al., 2015).

Table 3 contains the significant correlational coefficients ($p < .05$). As regards *Interest and determination* to learn English, two scales show strong correlation ($r > .5$) with it: *Using English on the internet* and *Contact.* These results indicate that deaf and severely hard-of-hearing learners are quite like any other learners who are learning a foreign language in order to use it with other speakers of that language (Csizér, Kontra, et al., 2015). The strongest correlation between *Instrumentality* and other scales is with *Milieu* showing that it is really important to deaf and severely hard-of-hearing learners to be encouraged by friends and family when it comes to language learning due to its inherent difficulties for them. A similarly high correlation value is found between *Contact* and *Milieu* attesting the important role milieu can play in using the foreign language per se. It is not surprising that *Beliefs about sign language use in and outside of schools* correlate highly but, more importantly, they show significant correlations with *Teaching methods* corroborating earlier results about the vital roles sign languages play in foreign language learning for deaf students (Kontra & Csizér, 2013). Appropriate *Teaching methods* also show significant correlation with *Contact* and *Affective learning strategies* attesting to the fact that school activities might contribute to meaningful contact with the target language as well as the importance of having strategies to cope with anxiety-inducing situations in language learning. It is puzzling to see that the scale of *Cognitive learning strategies* does not seem to correlate with any of the other scales, which will have to be looked into in the future.

Interview Results

In the course of the content analysis of the 12 individual interviews, insightful details took shape regarding such individual differences of the participating deaf students as their beliefs about language learning, learning strategies, and motivation. These were embedded in their personal experiences in different educational and national contexts. The data provided insight into the students' ideas about effective teaching and teaching methods including the use of sign language. Length limitations do not allow us to discuss every detail here, and therefore the presentation of the data is restricted to those areas which add complementary details and/or provide depth to some of the findings of the quantitative phase. The excerpts from the transcripts are translations either by the interpreters or the researchers except for quotes from Leo, who talked in comprehensible English throughout the interview.

TABLE 3
Significant Correlation Coefficients Among the Scales ($p < .05$)

Scales	1	2	3	4	5	6	7	8	9	10
1. Interest and determination	1									
2. Instrumentality	.40	1								
3. Contact	.53	.38	1							
4. Milieu	.35	.54	.60	1						
5. Using English on the internet	.56	.47		.36	1					
6. Teaching methods	.33		.28			1				
7. Beliefs about sign language in schools						.32	1			
8. Beliefs about sign language in life						.39	.77	1		
9. Cognitive learning strategies									1	
10. Affective learning strategies		.32		.28		.35				1

Experience. Language learning experience is an important factor in shaping both language learning motivation and learner beliefs (Csizér & Kálmán, 2019; Dörnyei, 2009; Horwitz, 1999). The main context of language learning that has an impact on students' later dispositions is public education in each of the participating countries. The interviewed students did have a chance to take part in foreign language education whether they attended a special school for the deaf and hard-of-hearing or a mainstream school, but the effectiveness of the programs varied. The material covered in the lower grades was not much; in most cases it was restricted to vocabulary related to topical areas such as family, school, or hobbies.

> It was learning vocabulary, for example, the teacher showed us a picture, and we had to say in English what we see in the picture. But not sentences, tenses, maybe at the end, in the 8th or 9th grade we did it … (Pavel)

> We were learning words: colors, numbers, articles, verbs, adjectives, opposites, fat and thin, customs, traditions, Christmas. Words related to it. Family. (…) There were some sentences too. Subject, predicate. (Csaba)

More substantial learning took place in high school, in grades 9–12 or 10–13, depending on the school system. One of the Czech participants even had two types of compulsory English at her vocational high school: a course in general English and one in English for Specific Purposes (ESP), which was loaded with technical terms she could hardly cope with and which she "hated" therefore (Adel). The Austrian participants had to take the school leaving (Matura) exam in English, which their universities recognize as B2 level proficiency according to the Common European Framework of Reference (Council of Europe, 2001). Therefore, at the university our Austrian participants are already expected to be able to use the language, for instance, to read some of the literature in English or understand a lecture in English if necessary, which they find quite challenging just like this student who admitted that reading German sources was much easier and faster for her:

> If I look into research results, from England or Scotland, it's Paddy Ladd for example, I have read a lot of his texts, because he writes a lot about Deafhood. (…) I would say 40% of the literature I will have to read will be in English. (Martina)

Another Austrian participant pointed out that in computer engineering students "come from all over the world so this is why we need English and the lectures are in English, almost everything in English," for which his general English knowledge from high school is not sufficient (Leo).

The most important factor shaping the language learning experience of the students before entering higher education seems to be the teacher both as a person and as a professional. The positive personal qualities of *good* teachers emerging from the data were patience, empathy, helpfulness, and care. On the professional level, the qualities of good teachers were described in line with the oralist approach: they articulate well, their speech is clear and easy to lipread; they use visuals and written material; when the class is working on listening comprehension, they provide deaf and severely hard-of-hearing students with the script of the text; they do not only teach vocabulary and grammar but they show and let students practice how language is used for

communication mainly in reading and writing. Good teachers do not exclusively rely on frontal teaching but make the students interact with one another for instance doing simulations in groups of three in speech if they are hard-of-hearing, and in writing if the students are deaf.

Unfavorable experiences with teachers can develop into very negative attitudes, a situation which is exemplified in the case of a mature Czech student who resents that there is a "compulsory" FL requirement, which she calls "unfortunate," although she admits that the individual language classes provided by her university are great; nevertheless, for her it is all "a loss of time" and "a struggle." She studied English at high school but she feels she is still just a beginner:

> I remember that I was quite bored in the lessons because we only learnt vocabulary. (…) And we didn't do any grammar. I only started that here at university. When I started studying, I was surprised that there is grammar and that one has to learn it. (…) The teacher was hearing and she couldn't use sign language. So she spoke and we read her lips or she wrote on the blackboard. (…) And that was all. That's how I remember it. (…) I was 16 when I started the secondary school, I was interested in learning another language, but if we had had at least a good teacher, I believe she could have made me interested in it, but this particular one was bad. And I think if I'd got the basis at the secondary school, I would now have a better study, better understanding or feeling, or relationship towards English. (Dana)

Beliefs. Beliefs are shaped by experiences such as the above. A major part of the comments coming from the interviewees concerned their beliefs about the English language, how it should be taught and what role sign language should play in the process of FL learning and teaching. Each participant was asked whether they thought English was an easy or a difficult language and they all agreed that it was easier than their national spoken language except for pronunciation. This response, on the one hand, confirms what was found in an earlier study of Hungarian adults (Kontra, 2017b) and follows logically from the fact that Czech, Hungarian, and German each have a *shallow* orthography, the script follows the pronunciation quite closely as opposed to English with its *deep* orthography. On the other hand, it also indicates that our deaf participants were not *natural acquirers* of their national spoken language as their mother tongue—each a highly inflected language with complex morphology and syntax—but learned it as a school subject. One of the Austrian female participants explained:

> For example, it is very hard to remember the articles in German, you have to know the gender of a noun to choose the right one. In English, it is just "the." And you have the four cases of the nouns that change the suffixes, -n or -m. I really do not know my way around these; I make a lot of mistakes, as I cannot hear it. (Lisa)

A Czech participant who had also studied some German made the following comparison:

> Well I think it [English] is easy. Well, if I compare it with German. (…) But in German you read the same as you write it but not in English, so that's more difficult. From what I know, Czech is hard. Harder than English. (Pavel)

The interview participants had some strong beliefs about how English should be taught to deaf learners. The most frequently made point they argued for was visualization, using various means to present both vocabulary and structures visually through pictures, projected images, charts, videos with subtitles, and using such traditional means as printed handouts and writing on the board. There was agreement among the participants about the importance of teaching via sign language. One of them explained it in very simple terms: "Because the student needs to see something, not hear" (Ludvik).

Sign Language. The use of sign language on the part of the teacher plays a role in motivating learners who cannot access speech since via lip-reading only a fraction of the information gets through and much guessing "from the few words that can be decoded" is required (Baker, 1999, p. 126). A Czech deaf participant, who only got his implant at age 17, explains it as follows:

> The fact was that the teacher wasn't signing so that's why not many people paid attention and they were chatting, just me and maybe another person were paying attention, we tried. But otherwise there was not much cooperation. (Ludvik)

A few of the participants had some experience with English teachers who were able to sign and who used the national sign language for giving instructions and explanations and for answering students' questions. A young Hungarian explains the importance of this as follows:

> Another important thing is that if the teacher is explaining something and someone has a question, they should be allowed to ask it. That there should be interaction. That the students should also have a chance to ask questions so that they receive sufficient

> information for their development. If the teacher has to be listened to in quiet, that is not good. If you cannot ask questions, that is no good. (Csaba)

Some of the Czech and Austrian interviewees were also able to give accounts of their experience with a support teacher or a teaching assistant at school. All the Austrian respondents reported having received help with English from teaching assistants either in or after class especially in the higher grades. This was less frequent in the case of the Czech respondents and not mentioned at all by the Hungarians. The assistants were mainly needed for explaining those parts of the material taken in class that the students did not understand, but it also happened that the student did the group- or pair-work task with the support teacher:

> [Teamwork] was hard for me because I couldn't understand the other student er … pupil … what they talk about because … because the noise was so loud (…) when there was teamwork, I went outside of the class with her and talked about what is the main discussion about … (Leo)

Regardless of whether a student attended a special or a mainstream school, education invariably took place orally. Even the teaching assistants or support teachers provided help with English in speech, either in spoken English or in the local spoken language.

In the Hungarian sample the students' experiences vary. It is known from previous research that the fluctuation of language teachers at special schools is quite common (Kontráné Hegybíró, 2010), so there is little continuity in the FL program. Csaba, for instance, had both signing and non-signing teachers of English although everybody in his class was deaf and they communicated in sign language. He explained that via lip-reading they could hardly understand anything:

> Two of them could not sign. They were not really good either. They were poor teachers. The third one was good, she stayed with us until the 7th grade, for two years, then she left. She wanted to fit in, she started to learn HSL, she understood sign language. Then she left. In the 8th grade there was a new teacher again. She was not very good either. (Csaba)

For this student, the poor language learning experience meant that he was advised against attempting the school-leaving exam in English and was given a waiver. Fortunately, he has not lost his motivation and is now trying to make up for lost time; however, finding a course for deaf adults is extremely difficult.

Due to the strong oralist traditions, the three Austrian female participants only learnt ÖGS as adults at the age of 18–19, at 22, and at 28. Two of the Hungarian deaf participants also learned HSL late: Barbara only as a teenager and Anna, who lost her hearing during adolescence, learnt to sign as an adult. In other words, they all received oralist education. Nevertheless, they each are convinced supporters of the use of sign language in teaching English to deaf learners.

Most of the interviewees believed that the teachers themselves should be able to use the national sign language instead of using an interpreter because that way the deaf students do not have to divide their attention between the teacher and the interpreter and no information is lost by the interpreter merely summarizing the explanation of the teacher. Some students nevertheless mentioned that if the teacher is not proficient in the given sign language, it is better to have a professional interpreter. A Hungarian participant (Anna) pointed out that it was not only difficult to find an HSL interpreter with good English skills, there was also no guarantee that the support service would always send the same interpreter, yet a new person would have no information about what happened in the preceding classes or lectures. Some of the participants, however, also believed that the main advantage of the teacher's knowledge of sign language was that they would be familiar with how deaf people think. A Hungarian deaf respondent who has already experimented with teaching English to others explained: "If I know their sign language, I can understand better what they are like and how they function" (Barbara).

Strategies. In the course of the interviews the respondents were asked about good language learning strategies in different ways but only a few of them were able to elaborate on this topic. The majority seemed to be rather teacher reliant in their learning doing the tasks that the teacher assigned. Those few who were more autonomous and were eager to improve their skills listed a variety of strategies from conventional rote memorization of vocabulary to reading dual language books, watching movies with English subtitles, looking up the meaning of words in a monolingual electronic dictionary, using a mobile application for lexical development, as well as hiring a private tutor to improve writing skills.

Online learning seems to appeal to this generation but we cannot say that they are all actively and autonomously seeking out opportunities to

practice and improve their knowledge and skills. One of the respondents, for example, reported to practice English by watching movies with English subtitles but she also highlighted the benefits of using online chat with strangers:

> At the moment I don't do it so much but I used to do more on the internet; I was looking for contacts, for international contacts on the internet, and there I went to English speaking chatrooms, I chatted on the internet. (Doris)

Another respondent spoke enthusiastically about the benefits of mobile phone applications for language learning, for looking up the meaning of words in an electronic dictionary or for memorizing vocabulary, but it turned out that he was not actively using them: "I have one in my mobile, but I don't use it" (Pavel). The Czech respondents, who at the time of data collection were all taking classes to fulfill a FL requirement, reflected very positively on the online learning program developed locally by their teachers at the support center and found the real-time chat opportunities extremely useful. The following comment sums it up succinctly: "At university I got to the level when I could actually write or communicate with English people or foreigners. I was not able to do that before" (Ludvik).

Due to previous research findings which indicated that deaf language learners found involving ASL in learning English vocabulary quite useful (Kontra, 2013), we were interested in finding out if the students in this sample would use similar strategies. Some of the participants indeed gave accounts of strategies that involved either ASL or the national sign language. Knowing the ASL sign for a word, for instance, can help the memorization of the matching English word: "I have this experience when I knew a sign in ASL and then it was easier for me to remember the word, I connected the sign to the word" (Adel). Another learner translates the new English word into both spoken Hungarian and HSL in order to memorize it. When he was asked to clarify what this strategy was good for, he gave the following explanation: "Because it becomes visual. It is easier to memorize. Take *chair*, for instance. I transform it to myself. *Glasses* too. Or *car*, for instance. I translate it too. Into Hungarian or HSL or both" (Csaba). When reading a text, he first translates it mentally into Hungarian and then he visualizes it in HSL.

Somewhat unexpectedly, the students in this sample did not attribute great importance to the use of BSL or ASL in teaching English to deaf learners but this might be because not many of them have had experience in this respect. A few of them thought this would be relevant mainly for those who were planning to work abroad.

Motivation. The interview participants' main motivation to learn English and to learn it well was instrumental, either related to the job they wanted to fill in the near future, or related to some other practical aim, for instance, participating in the international activities of a Deaf sports club or youth organization. One participant's (Emil's) motivation was fuelled by the frustration he experienced when he was unable to use English in a simple encounter with foreigners. There was only one among the 12, Dana, who was completely demotivated, who knew she would have to pass a B2 level proficiency exam for her degree but still did not demonstrate any motivated learning behavior. She said she participated in the obligatory classes but did not prepare for them although she feared she might have to extend her studies by an extra year in the likely event she does not pass her English exam.

The interview participants turned out to be mainly motivated to learn to read and write. Those with better hearing abilities considered learning to speak also important to some extent, but almost everybody rejected spending time on listening activities. "No, no, I'm not interested in pronunciation. Only when it was some very interesting word, I asked how is it pronounced but apart from that I didn't learn it," Adel said in the interview. Reading and writing on the other hand received a lot of support. They explained, for instance, that when they were abroad, they could communicate with hearing people in shops or at the airport by typing their questions into their mobile phones to which they could get a written response.

When discussing how students could be more motivated to learn English or other foreign languages, the idea of travelling abroad via student exchange programs received a great deal of support. They felt there should be more opportunities for students already at the secondary level, for instance, mobility programs or study abroad grants.

DISCUSSION

The data gained from the quantitative and qualitative sources yield a complex picture of deaf and severely hard-of hearing foreign language learners. At *micro level* what distinguishes this group from their hearing peers is predominantly the lack of a solid L1, a language that is acquired in the course of "primary socialization

inside the family, in other words, the period from birth to right before formal schooling and literacy enter children's lives" (The Douglas Fir Group, 2016, p. 21). Since a "strong foundation is necessary for the transfer of skills to an L2" (Marschark & Lee, 2014, p. 217), deaf and severely hard-of-hearing people experience the consequences of a lack of a solid L1 throughout their foreign language learning career.

Deaf and severely hard-of-hearing people do not all use sign language; some consider the majority language their L1 even though their competence is likely to be below that of their hearing peers. Since sign language does not have a written form, the use of the majority written language in FL learning is unavoidable even when the medium of teaching is sign language. Teachers, however, must be aware that for people with a profound or severe hearing loss the majority language, as highlighted by our participants, functions as a *foreign language*, and using it as a point of reference in language teaching may not ease the understanding of problems with English morphology or syntax. Some deaf students mentally translate the meaning of words or texts into sign language though not all of them are always aware of doing so. This kind of visualization, however, might be beneficial to all sign language users and could be encouraged by language teachers. Encouragement is needed indeed since due to the strong oralist traditions in the three participating countries, deaf persons' confidence in their national sign language and its use is still low. For instance, in a Hungarian case study, the teacher–researcher observed in his first-grade class of six D/deaf children that the sign-rejecting attitude of his teacher colleagues was contagious and very soon the three children of Deaf parents "who had previously been proud of their useful heritage lost pride in their not highly valued language proficiency and adopted their teachers' attitude" (Muzsnai, 1999, p. 286). Regrettably, as Marschark and Lee point out, it is a common phenomenon in the case of speakers of minority languages that "attempts to suppress children's use of their first language can lead to feelings of shame and embarrassment" (2014, p. 215).

Significant is the influence of persons and institutions at *meso level* (The Douglas Fir Group, 2016, p. 24) on deaf and severely hard-of-hearing students' FL learning. Friends and family members may function as role models, communication partners, or simply helpers who can act as in-house teaching assistants. An extended stay abroad with the family or a relationship with a native speaker boy- or girlfriend can also be highly effective. Especially important is the language learning experience of students at school. While *good* teachers and *good* teaching as described by the interviewees can exert a long-lasting positive impact, a bad teacher and ineffective methods can demotivate a language learner way into adulthood. As we have seen, deaf and severely hard-of-hearing students seem to be more teacher dependent than their hearing peers. Our data support earlier findings by Knoors and Hermans (2010), who remark that deaf learners "need teachers who present curricular content in a structured and well-organized way" (p. 65). This comes across as more important than the teachers' ability to use sign language as the medium of education, which might be substituted by using a proficient interpreter. On the other hand, it must be noted that even those respondents in our sample who were brought up and educated in a hearing environment realized they belonged in the Deaf community; they felt the need to acquire sign language either as adolescents or as adults and they, too, fully support the inclusion of sign language in education.

At *macro level* (The Douglas Fir Group, 2016, pp. 24–25) it is interesting to observe the impact of society, social, and educational expectations manifested in broader curricular requirements and employment opportunities. As mentioned before, the general FL requirement at universities applies in different ways in the three countries that featured in our research. The curricular requirement as an external motive alone does not seem to be enough to make someone study hard if the person's future goals either in the professional or the private sphere do not require the knowledge of an FL, and effective teachers and up-to-date educational facilities in higher education do not diminish the long-lasting negative effect of poor teacher performance at primary and secondary schools.

CONCLUSION

In response to our research questions, we can say that there is much more to know about deaf and severely hard-of-hearing foreign language learners than meets the eye, and that the differences between them and their hearing peers is more fundamental than having different levels of hearing ability. Due to their unique language background as well as learning experience, deaf and severely hard-of-hearing learners of English have distinctively different needs, necessities, and expectations. Based on our results, it seems that challenges, setbacks, and demotivation are

more the rule than the exception for our deaf and severely hard-of-hearing participants. The obvious need to create a motivating and effective learning environment for these learners definitely increases teachers' and teacher trainers' responsibilities in each of the contexts investigated. Teaching the foreign language should be coupled with introducing effective learning strategies to learners as well as familiarizing them with autonomous ways of practicing the FL. These tasks, though, seem to be beyond the teachers in these contexts, as many of them are reluctant to learn the national sign language in order to raise their own efficiency in the classrooms.

No research is without limitations, and ours is no exception in this respect. The inherent limitation of all deaf and hard-of-hearing studies in our contexts stems from the small but varied population, which makes multivariate statistical analysis impossible. In addition, we have relied on self-reported data, which ideally could have been complemented with observational studies in order to better understand classroom processes. This, however, was not possible under the circumstances. This problem coupled with the state of education of deaf and severely hard-of-hearing students in the above contexts, indicates a clear future research niche: in order to better understand good practices, more in-depth analyses of successful deaf and severely hard-of-hearing language learners as well as a variety of case studies of successful teachers and teacher training initiatives are necessary.

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APPENDIX

Student Interview Guide

Introduction: I am NN, a member of the LangSkills international research team. Thank you for volunteering for this interview. This is XY our SL interpreter. If there is anything you do not understand, please do not hesitate to stop the interpretation and ask for clarification. I would like to talk to you about your experiences in learning English. First, may I have your permission to record our conversation to make sure that nothing you say is lost? The research is completely anonymous, your name is not going to be used anywhere.

1. What do/did you study? (University/Faculty/Major) Why did you choose this field of study?
2. May I ask you how old you are?
3. Which year are you in? When will you graduate? (if appropriate)
4. What job would you like to fill after graduation?/What job do you have now? Does it require any knowledge of English? How?/Why?
5. Are you currently learning English? Tell me about it.
6. Where and when did you start learning English? Please describe your English language learning experiences. Did you learn other languages?

7. What secondary school did you attend? (special school/integrated school or class)
8. Did you have English classes there? What were they like?
9. Did any of your English teachers use ASL or BSL? Tell me about it.
10. Can you say you are a successful language learner? Why? Why not?
11. What do you find difficult in learning English? What helped you overcome these challenges?
12. How does English compare to German/Czech/Hungarian?
13. In an English course for Deaf/HoH persons what should the teacher focus on: reading, writing, listening, speaking? Please, explain.
14. There are some language teachers who use a SL interpreter when they teach English, other teachers learn SL themselves and use it during the English lesson to aid communication with the students. What does/did your English teacher do? Did you find it useful? Please explain why or why not.
15. When you are learning new words, do you translate them to yourself into SL? During the English lesson, do students translate new words for each other into SL? And the teacher?
16. When you are reading something in English (a message, a blog entry, an email, some information on the internet), do you translate it yourself into SL? When you are studying for your next English class, do you translate to SL?
17. Tell me about your English course here at the university.
18. Please, describe an English lesson in detail: what do you usually do? What does the teacher do?
19. Do you do any self-study on your own? Approximately how many hours a week? Tell me what exactly you do.
20. How do you usually prepare for a test in English?
21. Would you like to take a proficiency exam in English? How are you preparing for that exam? Are Deaf/HoH students given any accommodations at this exam?
22. Is there anybody, a friend or a family member, who is helping you with English? Who? How?

Is there anything else you would like to tell me about learning English?